

TACTICAL SAFETY



TACTICAL SAFETY



Safety program elements that are especially critical in a tactical environment:

- Risk management.
- Accident responsibilities.
- Crew endurance.
- Gunnery operations.
- Night operations.
- Convoy operations.
- Maintenance safety.
- **Transportation of hazardous material.**

Protect the Force Through Risk
Management

TACT-2

TACTICAL SAFETY



Safety program elements that are especially critical in a tactical environment:

- POL safety.
- PPE.
- Hearing conservation.
- Environment (weather, critters, altitude, political).
- Bivouac site operations.
- Ground guides.
- ~~Off road vehicle operations.~~
- Weapons and ammunition safety

Preventable Offroad Vehicle Risk
Management

TACT-3

PRE-DEPLOYMENT



In-brief w/unit leaders:

- **Deployment info.**
- **Brief unique requirements.**
- **Brief subordinates.**
- **Use info for mission planning.**

Mission planning phase:

- **Evaluate mission.**
- **Hazard ID, Assess, Controls**

Protect the Force Through Risk Management

TACT-4



KING

00 LV 63

CZF
064

PRE-DEPLOYMENT



Safety briefings, meetings, classes:

- **Environmental concerns**
- **Weather related injury prevention**
- **Convoy Ops**
- **Wire strikes**
- **Responsibilities in the event of a Mishap**
- **Weapons/Ammo Safety**
- **Stove/heater maintenance & Operation**
- **Load Plans**
- **Rule of Engagement**
- **CBT Lifesavers**

PRE-DEPLOYMENT



Pre-deployment checks for adequate PPE:

- **Cold/wet weather.**
- **Hot/dry weather.**

PRE-DEPLOYMENT

A photograph of a military convoy of Humvees driving on a snowy road. The lead vehicle is a dark-colored Humvee with a large antenna on its roof. It is followed by several other similar vehicles. The background shows a snowy landscape with mountains in the distance under a clear blue sky.

CONVOY/LOAD OUT

PRE-DEPLOYMENT



Pre-Convoy/Load out safety:

- Ensure all personnel attend the **convoy briefings.**
- Ensure all personnel know what the **procedures are** if they become

separated from the convoy.

Protect the Force Through Risk
Management

TACT-9

PRE-DEPLOYMENT



Pre-Convoy/Load out safety

CONT...

Check the following:

- Driver & assistant driver qualification (NVD, HAZ).
- Crew rest.
- Appropriate maps for each vehicle.
- Emergency equipment.
- Briefed on convoy speeds and following distances.

Protect the Force Through Risk
Management

TACT-10

PRE-DEPLOYMENT



Pre-Convoy/Load out safety

CONT...

Check the Condition of Vehicles:

- Obvious leaks.
- Serviceable & clean windshields, mirrors, & lights.
- Serviceable tires (tread, inflation, lug nuts, etc.).
- Load security.
- ~~Antennas tied down.~~

PRE-DEPLOYMENT



TACTICAL PROCEDURES:

- **Ensure soldiers know the procedures.**
- **Accidents vs. Breakdowns**
- **Determine procedures for notification of higher headquarters in the event of an accident.**





STRESS & FATIGUE

Protect the Force Through Risk
Management

TACT-14



DEFINITIONS



- ***Stress*** - the body's reaction to a harmful force, either physical or physiological. It is that state of unbalance between demands made on us from outside sources and our capability to meet those demands. It can lead to fatigue.

- ~~• ***Fatigue*** - the result of multiple stresses~~

Protect the Force Through Risk Management

TACT-16

TYPES of STRESS



- **Acute** - short term. Lasts minutes to hours. Usually intense, this is the worst kind.
- Causes irrational behavior
“I’m gonna kill someone!”



TYPES of STRESS



- **Chronic** - long term. Lasts days to years. Less intense than acute and hard to detect.
- Long term health degradation problems - Clinical Depression, High Blood Pressure



TYPES of FATIGUE



- **Acute** - short term. Caused by excessive mental and physical activity. Usually relieved with a good night's sleep.
- **Chronic** - long term. Caused when acute fatigue is prolonged. Can be incapacitating. Cannot be relieved with just a good night's sleep.



CHARACTERISTICS of FATIGUE



ACUTE

- **Stimulus**
- **Error in timing**
- **Accuracy**
- **Error accumulation**
- **Easily distracted**
- **Neglect of secondary tasks**
- **Inattention**

CHARACTERISTICS of FATIGUE



CHRONIC

- **Reaction Time**
- **Poor judgement**
- **Irritated**
- **Loss of appetite**
- **Weight loss**
- **Insomnia**
- **Depression**

ACUTE FATIGUE



PREVENTION:

- Physical conditioning - be in shape.
- Limit work periods.

TREATMENT:

- Rest
- Natural sleep (unmedicated).

CHRONIC FATIGUE



PREVENTION:

- Exercise.
- Minimize self-imposed stressors.
- Improve working & living conditions.
- Adequate rest.
- Adequate training.
- Tours of duty.
- Motivation.

CHRONIC FATIGUE



TREATMENT:

- Remove from dangerous duties.
- Leave or Pass.
- Change duties.
- Avoid evacuation - psychotherapy.

Protect the Force Through Risk

Management

****If unsure about mental state seek medical advice***

11/12/20

SLEEP PLANS



***Everyone needs sleep
(leaders too!)***

Benefits of sleep/rest plans:

- Rested soldiers.
- Higher morale.
- Greater will to fight--alert.
- Continuous operations.

Sleep areas:

- Separate sleep areas (day/night).
- Prohibit vehicles in sleep

location.

Protect the Force Through Risk
Management

TACT-27

- No sleeping in vehicles

WEATHER INJURIES



Prevention is the key!

- **Educate soldiers**
- **Hydration**
- **Nutrition**
- **Rest**
- **Physical conditioning**
- **Acclimate**

-
- **When possible limit**

Protect the Force Through Risk
Management

TACT-29



PREVENTION MEASURES RECOGNIZE THE SYMPTOMS TREATMENT

Protect the Force Through Risk
Management

TACT-30

HEAT INJURIES

A background image showing two construction workers. One worker on the left is wearing a yellow hard hat and a grey shirt, looking down. The other worker on the right is wearing a yellow hard hat and a brown shirt, looking towards the left. They are working on a construction site with rebar and concrete visible.

Sunburn

Symptoms - reddening skin, burning.

Treatment - Get out of the sun, use sunscreen._

HEAT INJURIES



Heat Cramps

Symptoms - cramps, excessive sweating, thirst, & dizziness.

Treatment - move to shade, loosen clothing, slowly drink water, seek medical aid if cramps continue.

HEAT INJURIES



Heat Exhaustion

Symptoms - profuse sweating, headaches, weakness, dizziness, loss of appetite, heat cramps, nausea -- vomiting, urge to defecate, chills, rapid breathing, tingling in hands/feet, & rapid breathing.

Treatment - move to shade, loosen clothing/boots, pour water on casualty, slowly drink water, elevate legs, seek medical aid.

HEAT INJURIES



Heat Stroke

Symptoms - red hot dry skin, stop sweating, headaches, dizziness, nausea -- stomach pain, confusion, weakness, loss of consciousness, seizures, weak & rapid pulse and breathing.

Treatment - move to shade, loosen clothing/boots, immerse in water, elevate legs, slowly drink 1 canteen of cool water, ice packs in neck, groin & underarms, get medical aid.

COLD WEATHER INJURIES



Snow Blindness

Symptoms - scratchy eyes, headaches, and pain with light.

Treatment - cover eyes with a dark cloth, and seek medical aid.

COLD WEATHER INJURIES

Chilblain

Symptoms - red swollen skin, skin lesions.

Treatment - warm with body parts and get medical aid.

* Do not rub affected areas.

COLD WEATHER INJURIES



Frostbite

Symptoms - *loss of sensation, sudden whitening of skin- tingling, redness or grayish coloring of the skin, blisters & swelling, yellow waxy looking skin, frozen area felt hard like wood.*

Treatment - *warm with body parts, remove tight clothing/jewelry, cover with blankets and get medical aid.*

~~* Do not rub affected areas.~~ Protect the Form through Risk Management

TACT-37

COLD WEATHER INJURIES



Prevention is the key!

- Educate soldiers
- Hydration/Nutrition
- Proper clothing/equipment
- Rest
- Physical conditioning
- Acclimate



- ~~When possible limit exposure~~

Protect the Force Through Risk Management

TACT-38

COLD WEATHER INJURIES

Clean clothes

Over-heating

Loosen clothing

Dry clothes

WEATHER INJURIES



Dehydration

Symptoms - dizziness, weakness, blurred vision.

Treatment - replace lost water, sip water.□

WEATHER INJURIES



Immersion/Trench Foot

Symptoms - cold- numb- painless, burning shooting pain, pale bluish skin, decreased pulse, blistering and swelling.

Treatment - gradual warming, dry feet, avoid walking, protect from trauma, seek medical aid.

Protect the Force Through Risk
Management

TACT-41

WEATHER INJURIES

Hypothermia

WARNING MEDICAL EMERGENCY

Symptoms - cold shivering stops, core temperature is low, uncoordinated move-ments, shock or coma, body temperature drops.

Treatment - warm liquids if conscious, start life support measures if necessary, get medical aid immediately.

SUMMARY



ELO 5: Types of weather injuries, treatment and prevention

- Hot weather injuries***
- Cold weather Injuries - snow blindness, chilblain, frostbite,***
- All weather - dehydration, Immersion/Trench foot, Hypothermia***



FIRE PREVENTION

FIRE PREVENTION



Overall prevention is dependent on:

- Adequate type, number, and location of fire extinguishers.
- Plan for replacement or recharging of expended fire extinguishers.
- Train personnel on proper use of fire extinguishers.
- Proper storage of fuel cans.

FIRE PREVENTION



- Maintenance of vehicles and power generation.
- No smoking within 50 feet of flammable, explosives or other combustible material.
- Ammunitions properly stored, segregated, covered and marked.

FIRE PREVENTION



Tent stoves

- Qualified operators
- Diesel/J8 fuel for M1941 (potbelly) stove
- Mogas for M1950 (yukon) stove
- Fire fighting equipment nearby.
- Pipe extends above tent and has spark arrestor.
- Cleaned daily.
- Never left unattended.

FIRE PREVENTION



- Fuel trucks grounded as well as vehicles during refuel.
- Fire fighting teams identified and trained.
- Fire extinguishers inspected, serviceable and properly located (ie. Tents, POL points, vehicles, etc,)
- Procedures understood for fuel and ammo storage and delivery ops.

FIELD/TACTICAL SITE SAFETY



Pre-Accident/Emergency Action Plans:

- All personnel know and understand procedures (rehearse when possible).
- Tailored for the operation and environment.
- Evacuation and recovery could be a matter of life and death!

FIELD/TACTICAL SITE SAFETY

Dining Facility

- Fire extinguishers
- M2 burner operations, qualified operators
- Immersion heaters
- Burns, cuts, and falls
- Field sanitation, disposal of waste



FIELD/TACTICAL SITE SAFETY



Motor pool

- **Parking plan**
- **Grounding of fuel vehicles**
- **Wheel chocks**
- **Speed of vehicles**
- **POL disposal**
- **Tire cage**

FIELD/TACTICAL SITE SAFETY

A background photograph showing a military helicopter on a tarmac. Several personnel in military uniforms are visible around the helicopter. The scene is outdoors, likely at an airfield or training area.

POL Point

- Fuel testing procedures.
- Disposal of waste POL in the field.
- Tanker parking.
- Vehicle grounding.
- Proper protective equipment.
- Water to wash off personnel contaminated by fuel/POL.

FIELD/TACTICAL SITE SAFETY



FARRP Operations

- Fire extinguishers
- Grounding and bonding equipment
- Aircraft parking
- Rearm pad procedures
- Ground guiding
- Proper protective equipment

~~• FOD survey~~

Protect the Force Through Risk
Management

TACT-53

FIELD/TACTICAL SITE SAFETY

LZ Set-up

- **Aircraft landing/take-off area, day and night considerations.**
 - arrival/departure routes
 - FARP location
- **Aircraft Parking**
 - terrain(slopes, ruts, dust)



PROTECT YOUR SOLDIERS.

FROM VEHICLE RUN-OVERS



RUN-OVERS



Controls

- Use ground guides inside bivouac & maintenance areas.
- Require drivers to physically check around the vehicle before moving.
- Perimeter guards at dismount point.
- Establish safe sleep areas.
- Require driver to stop if ground guide instructions are unclear or loses sight.

PROTECT YOUR SOLDIERS.



FROM VEHICLE ROLL-OVERS

ROLL-OVERS

Controls



- **Conduct recon in daylight.**
- **Use ground guide in limited visibility.**
- **Reduce speed.**
- **Watch the shoulder of the road.**
- **Properly secure loads.**
- **Rollover drills.**
- **Driver's Training & NVD's**

SUMMARY



ELO 6: Fire Prevention Measures

ELO 7: Field/Tactical Site Safety Considerations

ELO 8: Prevention of Run-over and Roll-over Accidents

RE-DEPLOYMENT



Safety Considerations

Plan re-deployment with unit leaders-

- **Monitor personnel for “get-home-it is”**
- **Ensure pilots & drivers have adequate rest.**
- **Weather**
- **Vehicle/aircraft condition/inspection**

RE-DEPLOYMENT



Safety Considerations

Convoy operations:

- **Plan for rest stops, meal breaks.**
- **Assistant drivers, senior occupant briefings.**
- **Route.**
- **Road conditions.**
- **Alternate plan.**

RE-DEPLOYMENT



Back in Garrison

- **Continue to monitor personnel for “get-home-itis”**
 - **Failure to follow known procedures**
 - **Accidents in unloading, motor pool operations**
- **Fatigue, unwinding on the trip home in POV**
- **Increased potential for alcohol related accidents**
- **Increased potential for family/domestic incidents**

Protect the Force Through Risk
Management

TACT-62

RAIL OPERATIONS



RAIL OPERATIONS



Ground Guides

- **Training to all drivers & ground guides.**
- **Require and enforce use of ground guides - escort all vehicles on and off the railcars**
- **Require one rail-car length from the vehicle they're guiding. Remind ground guides to never walk backwards.**

RAIL OPERATIONS



Ground Guides

- Require the use of ground guides when backing or when in congested areas
- Two ground guides when backing or vision is restricted.
- Remind drivers to keep ground guides in view at all time.

RAIL OPERATIONS



Load Teams

- Ensure load teams have appropriate PPE .
- Ensure load teams are properly trained.
- Provide instruction in proper use of tools. Inspect tools, blocking, lashing, spanners, and tow bars for serviceability before use.

• Require all tank turrets and

howitzer

be in travel lock

Protect the Force Through Risk
Management

tubes to
FACI 66

RAIL OPERATIONS



Power lines

- Keep personnel away from power lines.
- Require antennas be removed or tied down.
- Require use of ball tip protectors.

Drivers

- Ensure only qualified drivers move the equipment

SUMMARY

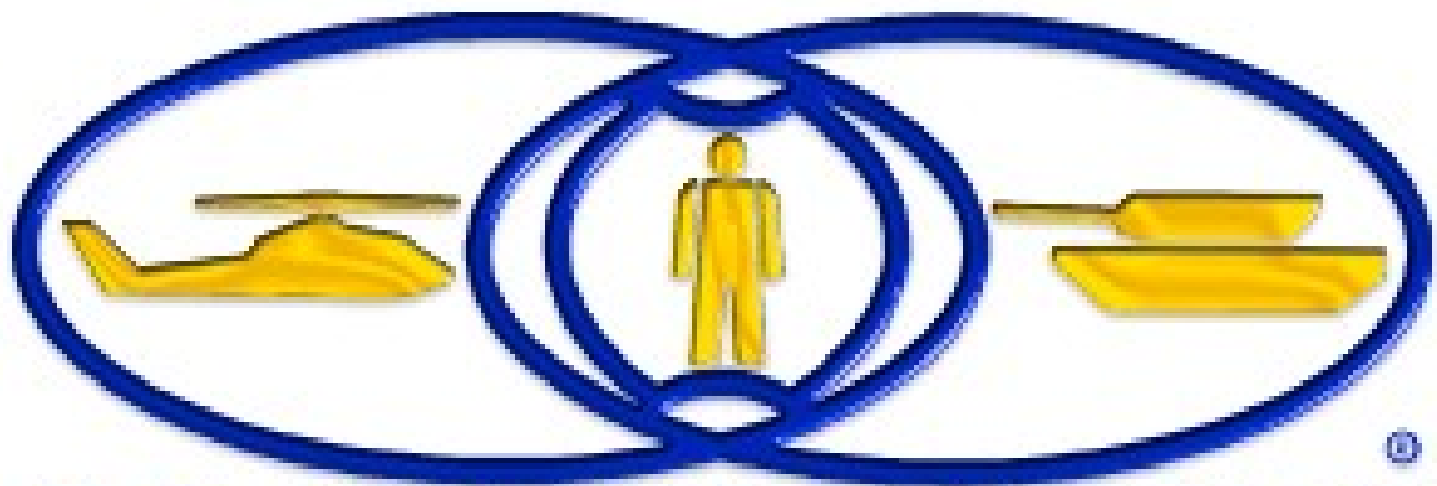


***ELO 9 - Redeployment Safety
Considerations***

***ELO 10 - Identify Rail Load Safety
Considerations***



QUESTIONS ?



U.S. ARMY SAFETY CENTER